

POHATCONG VALLEY GROUNDWATER CONTAMINATION NEW JERSEY

EPA ID# NJD981179047



EPA REGION 2
CONGRESSIONAL DIST. 05
Warren County
Washington and Franklin Townships

Other Names:
Brass Castle-Broadway
New Jersey Water Company
Washington Borough Well Contamination

Site Description

The Pohatcong Valley Groundwater Contamination Site involves the contamination of the Kittatinny Limestone Aquifer underlying the Pohatcong Valley. The aquifer serves as the sole source of drinking water for public and private parties in the area. The Site includes portions of Franklin Township, Washington Township, and Washington Borough in the Valley and encompasses approximately 5,600 acres. Pohatcong and Shabbecong Creeks are the primary surface water drainage for the valley, both of which meander through the valley in the direction of the Delaware River. Analyses of two public water supply wells in 1978 and 1979 revealed high levels of tetrachloroethylene (TCE) and perchloroethylene (PCE), prompting the closing of one well and the installation of a carbon filtration system at the other. In 1984 and 1985, the Warren County Health Department identified a number of volatile organic compounds (VOCs), including TCE and PCE, in 79 private wells throughout the Valley. Affected residences have since been connected to the public water supply system, and the New Jersey Department of Environmental Protection (NJDEP) sealed most of the impacted wells. Approximately 12,000 people obtain drinking water from public and private wells within 3 miles of the Site.

In 2002 and 2003, as part of a comprehensive effort, the NJDEP continued with sampling dozens of additional residential wells several miles downgradient of the current Site boundary. This sampling has revealed low levels of TCE detections above the NJDEP's MCL for TCE, in a significant number of the tested wells. At the present time, based on available data, it is not clear whether this contamination is related to or emanating from the Pohatcong Valley Site, as presently identified, and the EPA plans to initiate a second operable unit (OU2) remedial investigation and feasibility study (RI/FS), to determine the nature and extent of the TCE contamination in the downgradient area. More information regarding the potential source or sources of this downgradient contamination will be available once the OU2 RI/FS has been completed.

Site Responsibility: This Site is being addressed through Federal, State, and County actions.

<p>NPL LISTING HISTORY Proposed Date: 06/24/88 Final Date: 03/30/89</p>
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Threats and Contaminants



Ground water in the Valley is contaminated with various chlorinated VOCs, including primarily TCE and PCE. Use of contaminated private wells has been discontinued, and affected Pohatcong Valley residences are currently connected to a potable municipal water supply.

Cleanup Approach

Due to the size and complexity of the Pohatcong Valley Site, EPA has divided the Site into two operable units, OU1 and OU2. OU1 pertains to determining the nature and the extent of TCE and PCE groundwater contamination in Washington Borough, and parts of Washington and Franklin Townships, up to the Village of Broadway, at approximately Asbury Broadway Road. OU2 pertains to determining the nature and the extent of chlorinated VOCs in groundwater encountered in contamination downgradient of the current Site boundary, through approximately New Village and Stewartsville.

Regarding OU1, the current phase of work, this Site is being addressed in two stages: immediate actions and long-term remedial phases. Immediate actions addressed contaminated public and private water supplies. Long-term actions address identification and remediation of sources of contamination.

Regarding OU2, EPA has not yet initiated OU2 field activities at the present time, and is in the process of developing the scope of work and bringing on an RI/FS contractor to assist with the overall OU2 effort. More information on OU2 will be made public, when it becomes available.

Response Action Status



Immediate Action: In cases where the drinking water exceeded human health safety standards, Warren County supplied bottled water to affected residences. In 1988 and 1989, the NJDEP hooked up affected residences to public water supply wells. NJDEP continues to assess potential impacts from the groundwater contaminant plume by periodic residential monitoring.



Entire Site: Due to the size and complexity of the Pohatcong Valley Site, EPA has divided the Site into two operable units, OU1 and OU2. OU1 pertains to determining the nature and the extent of TCE and PCE groundwater contamination in Washington Borough, and parts of Washington and Franklin Townships, up to the Village of Broadway, at approximately Asbury Broadway Road. OU2 pertains to determining the nature and the extent of chlorinated VOCs in groundwater encountered in contamination downgradient of the current Site boundary, through approximately New Village and Stewartsville.

The EPA has completed and extensive OU1 environmental remedial investigation at the Site. EPA conducted geophysical studies to understand geological features of the Site in order to characterize the flow of groundwater and groundwater contamination. EPA initially identified 58 potential source areas, at which soil gas, soil, groundwater, surface water, sediment and/or ecological sampling have been performed during the first phase of a two-part study. Following this first phase, EPA narrowed the number of potential source areas to 10 areas. Comprehensive groundwater and soils sampling was conducted at the 10 PSAs, and a number of groundwater monitoring wells were installed. In addition to the above, environmental sampling was performed at all 10 identified potential source areas, to locate possible source areas of chlorinated

volatile organics affecting the Site ground water which will require clean up. Field work for OU1 was completed in September 2003. Additionally, EPA contracted with the USGS to begin the development of a comprehensive groundwater computer model to help fill in data gaps, and aid in predicting groundwater contamination fate and transport, however, at the present time, this computer modeling effort has been put on hold due to resource limitations. In 2001 and in late Spring 2002 as part of Remedial Investigation field work EPA has also sampled well water at approximately 30 homes to further assess potential residential exposure to groundwater contamination; of these residences sampled, no residences were determined to be at risk.

Since this time, in a comprehensive effort, the NJDEP has continued with sampling dozens of additional residential wells several miles downgradient of the current Site boundary, and has provided individual filtration units to those residences which have been negatively impacted above the NJ MCL for TCE. In September 2004, the DEP presented its preliminary findings to the EPA, and EPA decided that it is most efficient to handle the downgradient area and detections as a second operable unit (OU2).

EPA has not yet initiated OU2 field activities at the present time, and is in the process of developing the scope of work and bringing on an RI/FS contractor to assist with the overall OU2 effort. More information on OU2 will be made public, when it becomes available.

Site Facts: EPA has completed the OU1 Remedial Investigation (RI), and a draft RI report has been developed and is in review. Once the report has been finalized, a Feasibility Study (FS) for OU1 will be developed for the Site, to develop and screen appropriate remedial alternatives. A draft FS is expected to be provided in June 2004. After the appropriate alternatives have been evaluated and screened, EPA will present a proposed preferred remedy to the public. After a public comment period has been conducted and the EPA evaluates submitted public comments, a Record of Decision (ROD) for OU1 will be issued, in which EPA and the NJDEP will select a final Site remedy. The OU1 ROD is currently being planned for September 2004.

EPA has not yet initiated OU2 field activities at the present time, and is in the process of developing the scope of work and bringing on an RI/FS contractor to assist with the overall OU2 effort. More information on OU2 will be made public, when it becomes available.

Cleanup Progress

The provision of a safe drinking water supply has eliminated the potential of exposure to hazardous substances in the drinking water and will continue to protect the households near the Pohatcong Valley Groundwater Contamination Site until cleanup activities are completed. RI/FS activities, including soil, soil gas, and groundwater sampling, and groundwater flow modeling, will focus on identification of contaminant source areas at industrial facilities in the Valley. Additional efforts will attempt to define the range and extent of soil and groundwater contamination in the Valley, and routes of exposure through human health and ecological risk assessments.

Site Repository

Warren County Free Public Library, 199 Hardwick Street, Belvidere, NJ 07823